

# **Ethanol Fuel for Hawaii: State Policy, Incentives, and Mandate**



State of Hawaii  
Department of Business, Economic Development & Tourism  
Energy, Resources, and Technology Division  
[www.state.hi.us/dbedt/ert](http://www.state.hi.us/dbedt/ert)

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## ***State Laws Supporting Fuel Ethanol***

- Ethanol production credit
- Exemption from 4% state excise tax on retail sales
- Reduced highway taxes on E85
- Ethanol content requirement

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### ***State Tax Credit for Investment in Ethanol Production Facilities***

- Equivalent to 30 cents per gallon of fuel-grade ethanol produced
- Credit for up to 15 million gallons / year / facility
- Available up to 8 years if investment was less than \$50 million; up to 10 years for investment greater than \$50 million
- Facility must be in Hawaii and in production before January 1, 2012.
- [www.state.hi.us/dbedt/ert/ethanol-incentive.html](http://www.state.hi.us/dbedt/ert/ethanol-incentive.html)

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### ***Exemption from 4% state excise tax on retail sales for alcohol fuels***

- Fuel mixture consisting of at least 10% biomass-derived alcohol
- Applies to E10 and E85
- Exemption terminates on December 31, 2006
- [www.capitol.hawaii.gov](http://www.capitol.hawaii.gov)  
(find Hawaii Revised Statutes section 237-27.1)

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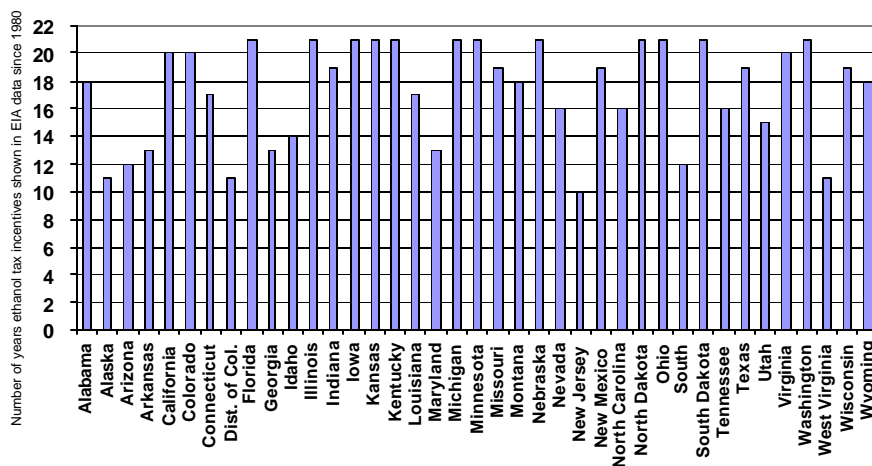
## Reduced Rate of State Highway Tax

- Alternative fuels are subject to one-half the effective state highway tax rate of diesel fuel
- Applies to E85
- Does not apply to E10 or oxydiesel
- [www.state.hi.us/dbedt/ert/fueltax-act143.html](http://www.state.hi.us/dbedt/ert/fueltax-act143.html)

State plus County taxes for on-highway use of alternative fuels:				
	Honolulu	Maui	Hawaii	Kauai
Ethanol (E100)	\$ 0.094	\$ 0.084	\$ 0.072	\$ 0.084
Gasoline	\$ 0.325	\$ 0.290	\$ 0.248	\$ 0.290

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## States with 10 or more years of fuel ethanol use



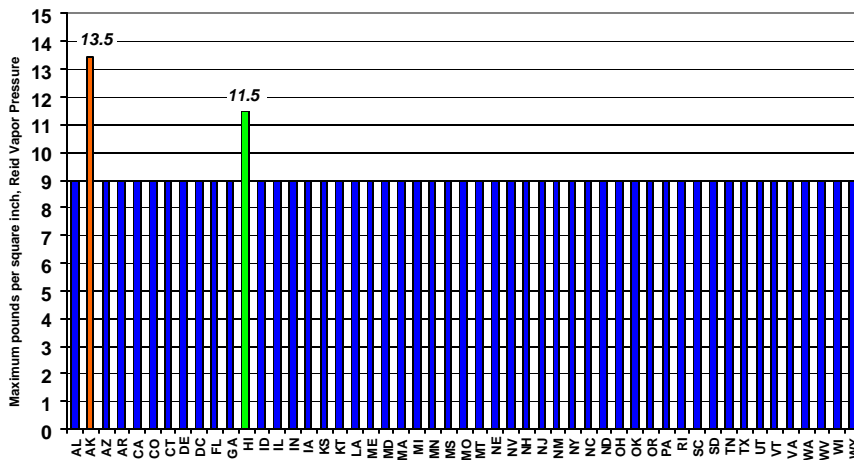
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## ***Fuel ethanol on the Mainland***

- On the Mainland, “independent” gasoline stations were the first to offer E10.
- Adding 10% ethanol to gasoline:
  - raises octane 3 points
  - raises vapor pressure (RVP) 1 pound / sq. in. (psi)
- EPA imposed summertime volatility limits of 7.0-9.0 psi in all areas of the U.S. – except Alaska and Hawaii
- EPA allows a 1.0 psi “volatility waiver” for gasoline ethanol blends - but it does not apply in Hawaii

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## ***Summertime vapor pressure limits\****



***\*(maximums; some areas subject to limits as low as 7 psi). Areas subject to EPA's 9 psi limit, but without serious air quality problems, are allowed a 1 psi waiver for gasoline ethanol blends.***

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### ***Why no fuel ethanol in Hawaii?***

- According to ASTM specification D4814, Hawaii is volatility class "C" all year: gasoline may not have a RVP (Reid vapor pressure) greater than 11.5 pounds per sq.in.
- Gasoline testing report in 1989 showed that vapor pressures ranged from 9.7 to 11.4 psi.
- Adding ethanol to gasoline near the 11.5 psi limit would result in out-of-spec fuel
- To blend ethanol in Hawaii, refiners would have to produce a suitable blendstock
- Bottom line: in Hawaii, refiner participation is necessary.

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### ***Hawaii Ethanol History (abridged)***

- 1984 **C. Brewer cancels plans to construct an ethanol plant on the Big Island.** According to their press release, "... we cannot invest \$15 million in capital to produce a product we cannot be assured of marketing ..."
- 1991 "Ethanol blending letter" sent to refiners & gasoline retailers asking: "for ethanol/gasoline blends to be cost-competitive, ethanol would have to be available for \$\_\_\_\_\_?" Responses indicated a lack of interest.
- 1992 Meeting of energy & agriculture people to see if there are ethanol & electricity opportunities at Hamakua.
- 1994 Numerous articles on "ethanol will (or won't) help save sugar."
- 1994 **Ethanol Content Requirement** signed into law. The law states: "DBEDT shall adopt rules ... to require that gasoline ... contain 10% ethanol..."
- 1995 National Energy Policy Act requires centrally-fueled State fleets on Oahu to purchase **alternative fuel vehicles**.
- 1995 "Transportation Energy Strategy" completed. Various approaches considered. E10 recommended as cost-effective approach.
- 1995 Oil company representatives say "we're energy companies," will blend ethanol if the price is right, mandate is not necessary.
- 2000 **Ethanol production incentive** signed into law. Incentive is 30 cents per gallon of fuel grade ethanol.
- 2002 Several ethanol producers are **ready to start construction of ethanol production facilities in Hawaii**. Ethanol production expected in 2004.

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### **§486J-10 (a) - Ethanol Content Requirement**

- The commissioner shall adopt rules ... to require that gasoline sold in the State for use in motor vehicles contain ten per cent ethanol by volume.
- The amounts of gasoline sold in the State containing ten per cent ethanol shall be in accordance with rules as the commissioner may deem appropriate.
- The commissioner may authorize the sale of gasoline that does not meet these requirements as provided in subsection (d).

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### **§486J-10 (b) and (c)**

- (b) Gasoline blended with an ethanol-based product, such as ethyl tertiary butyl ether, shall be considered to be in conformance with this section if the quantity of ethanol used in the manufacture of the ethanol-based product represents ten per cent, by volume, of the finished motor fuel.
- (c) Ethanol used in the manufacture of ethanol-based gasoline additives, such as ethyl tertiary butyl ether, may be considered to contribute to the distributor's conformance with this section; provided that the total quantity of ethanol used by the distributor is an amount equal to or greater than the amount of ethanol required under this section.

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### **§486J-10 (d) - Ethanol Content Requirement**

- (d) The commissioner may authorize the sale of gasoline that does not meet the provisions of this section:
- (1) To the extent that sufficient quantities of competitively-priced ethanol are not available to meet the minimum requirements of this section; or
  - (2) In the event of any other circumstances for which the commissioner determines compliance with this section would cause undue hardship.

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### **§486J-10 (e) - Ethanol Content Requirement**

- (e) Each distributor, at such reporting dates as the commissioner may establish, shall file with the commissioner, on forms prescribed, prepared, and furnished by the commissioner, a certified statement showing:
- (1) The price and amount of ethanol available;
  - (2) The amount of ethanol-blended fuel sold by the distributor;
  - (3) The amount of non-ethanol-blended gasoline sold by the distributor; and
  - (4) Any other information the commissioner shall require for the purposes of compliance with this section.

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### **§486J-10 (f), (g) and (h)**

- (f) Provisions with respect to confidentiality of information shall be the same as provided in section 486J-7.
- (g) Any distributor or any other person violating the requirements of this section shall be subject to a fine of not less than \$2 per gallon of nonconforming fuel, up to a maximum of \$10,000 per infraction.
- (h) The commissioner, in accordance with chapter 91, shall adopt rules for the administration and enforcement of this section.

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### **§486J-1 - Definitions**

"Competitively priced" means fuel-grade ethanol for which the wholesale price, minus the value of all applicable federal, state, and county tax credits and exemptions, is not more than the average posted rack price of unleaded gasoline of comparable grade published in the State.

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### **§486J-1 - Definitions**

"Distributor" means and includes:

- (1) Every person who refines, manufactures, produces, or compounds fuel in the State, and sells it at wholesale or at retail, or who utilizes it directly in the manufacture of products or for the generation of power;
- (2) Every person who imports or causes to be imported into the State or exports or causes to be exported from the State, any fuel; and
- (3) Every person who acquires fuel through exchanges with another distributor.

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### **§486J-1 - Definitions**

"Petroleum commissioner" or "commissioner" means the administrator of the energy, resources, and technology division of the department of business, economic development, and tourism.

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### ***Ethanol Content Requirement***

- Rules have not been finalized.
- Rulemaking takes several months.
- There is an opportunity for public input.
- If private companies can reach agreements that result in local production and availability of fuel ethanol, regulation may not be necessary.

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### ***Summary***

- Incentives and mandates are in place to support the local production and use of fuel ethanol.
- Fuel ethanol is not currently available in Hawaii.
- We expect it to be available in 2004.
- Working together, we can make it happen.
- Thank you

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### ***Websites with More Information***



- Hawaii State Energy Office:  
[www.hawaii.gov/dbedt/ert](http://www.hawaii.gov/dbedt/ert)
- Hawaii State Department of Taxation:  
[www.hawaii.gov/tax](http://www.hawaii.gov/tax)
- Hawaii State Legislature:  
[www.capitol.hawaii.gov](http://www.capitol.hawaii.gov)